

January 24, 2020

Willie Morales, City Administrator City of Appleton 323 W. Schlieman Avenue Appleton, MN 56208

RE: Engagement of Northland Securities as Underwriter

Dear Willie:

The purpose of this letter is to comply with federal regulations. Federal security regulations require you to affirmatively engage Northland Securities before we can provide you with advice on the issuance of municipal securities acting in the capacity of underwriter. This letter establishes the engagement.

The City of Appleton (the "City") seeks to engage Northland Securities to serve as underwriter for the issuance of General Obligation Refunding Bonds to refinance the G.O. Health Facilities Bond of 2004 (the "Issue"). This engagement applies solely to the Issue. The engagement is nonbinding. The City is under no obligation to undertake the Issue. The City may determine not to undertake a negotiated financing and to engage Northland in a role other than an underwriter.

The City desires Northland to provide all of the services needed to create and execute a plan to underwrite the Issue, including:

- 1. Advice regarding the structure, timing, terms, and other similar matters (including actions needed to authorize the issuance) of the Issue.
- 2. Preparation of rating strategies and presentations related to the Issue.
- 3. Assistance in the preparation of the preliminary and final official statements.
- 4. Assistance with the closing of the Issue, including negotiation and discussion with respect to all documents, certificates, and opinions needed for such closing.
- 5. Coordination with respect to obtaining CUSIP numbers and the registration of the Issue with the book-entry only system of the Depository Trust Company.
- 6. Preparation of post-sale reports for such municipal securities.

In acting as underwriter, Northland has a duty under rules of the Municipal Securities Rulemaking Board (MSRB) to make certain disclosures to the City concerning its role, its compensation, and actual or potential material conflicts of interest. In engaging Northland in this capacity, the Issuer should be aware of the following:

- Acting as underwriter for the Issue, Northland will provide advice to the City with respect to
  the structure, timing, terms, and other similar matters concerning the Issue. The City is
  responsible for understanding and assessing the implications of the Issue.
- Northland will purchase, or arrange for the placement of, the Issue in an arm's-length commercial transaction with the City. In this process, Northland is required to deal fairly at all times with both the City and investors. Northland has a duty to purchase the Issue from

the City at a fair and reasonable price, but must balance that duty with its duty to sell municipal securities to investors at prices that are fair and reasonable.

- 3. Under federal securities laws Northland does not have a legal fiduciary duty to the City (unlike a municipal advisor) and is, therefore, not required by federal law to act in the best interests of the City without regard to its own financial or other interests. Northland has financial and other interests that differ from those of the Issuer.
- 4. Northland will coordinate the issuance process including closing and delivery of proceeds. Northland will review the official statement for the Issue in accordance with, and as part of, its responsibilities to investors under the federal securities laws, as applied to the facts and circumstances of the transaction.
- 5. Northland will disclose any potential or actual material conflicts related to this engagement.
- 6. Northland's compensation is based on the size of the Issue and is contingent on the closing of the Issue (see below). The MSRB has identified this means of compensation as presenting a conflict of interest, because it may cause Northland to recommend a transaction that it is unnecessary or to recommend that the size of the transaction be larger than is necessary.

For serving as underwriter with respect to the Issue, Northland shall be paid an underwriter's discount based on a percentage of the total par amount of the Issue. A "not to exceed" percentage for underwriter's discount will be determined when the actual terms of the Issue have been set and therefore compensation is not included as part of this letter. The compensation due to Northland shall be deducted from proceeds at closing.

Northland agrees to pay the following expenses from its fee:

- Out-of-pocket expenses such as travel, long distance phone, and copy costs.
- Preparation of the bond transcript.

The City agrees to pay for all other expenses related to the processing of the Issue including, but not limited to, the following:

- Engineering and/or architectural fees.
- Publication of legal notices.
- Bond counsel and local attorney fees.
- Fees for various debt certificates.
- The cost of printing Official Statements, if any.
- City staff expenses.
- Rating agency fees, if any.
- Bond insurance fees, if any.
- · Accounting and other related fees.

It is expressly understood that there is no obligation on the part of the City under the terms of this engagement to undertake the Issue. If not issued, Northland agrees to pay its own expenses and receive no fee for any services it has rendered.

To engage Northland Securities as underwriter for the Issue as described in this letter, please sign and return this letter. In signing this letter, the City acknowledges and accepts the representations made in this letter. We look forward to working with you on this Issue. I would be happy to discuss this letter, our relationship with the City for the Issue, or other aspects of applicable federal securities regulations.

# City of Appleton, Minnesota Page 3

Since	rely,	
	Jusi	O,

Jessica Green Managing Director

Engagement of Northland Securities as underwriter and receipt of related disclosures acknowledged by the City of Appleton.

Date:	
Name:	
Title:	

		-
<u> </u>	 	

### City of Appleton, Minnesota

\$1,895,000 G.O. Refunding Bonds, Series 2020 (Preliminary A+ Rates as of 1/22/20)

### Sources & Uses

Dated 96/15/2020 | Delivered 06/15/2020

Carrage	Of Funds
Sources	THE RUNGS

Sources Of Funds	
Par Amount of Bonds	\$1,895,000.00
Total Sources	\$1,895,000.00
Uses Of Funds	
Total Underwriter's Discount (1.960%)	37,142.00
Costs of Issuance	24,000.00
Deposit to Current Refunding Fund	1,829,647.37
Rounding Amount	4,210.63
Total Uses	\$1,895,000.00

### City of Appleton, Minnesota

\$1,895,000 G.O. Refunding Bonds, Series 2020 (Preliminary A+ Rates as of 1/22/20)

# **Debt Service Comparison**

		Existing			
Date	Total P+I	D/S	Net New D/S	Old Net D/S	Savings
12/15/2020	49,947.50	. 11,272.31	57,009.18	78,906.95	21,897.77
12/15/2021	119,400.00	, <u>.</u>	119,400.00	135,272.32	15,872.32
12/15/2022	118,080,00		118,080.00	135,270.65	17,190.65
12/15/2023	116,760,00	-	116,760.00	135,269.28	18,509.28
12/15/2024	1-1-5-440:00		115,440.00	135,270.08	19,830.08
12/15/2025	119,120.00	н	119,120.00	135,270.66	16,150.66
12/15/2026	117,717.50	-	117,717.50	135,270.37	17,552.87
12/15/2027	116,315.00	-	116,315.00	135,270.44	18,955.44
12/15/2028	114,912.50	-	114,912.50	135,269.83	20,357.33
12/15/2029	118,212.50	-	118,212.50	135,272.02	17,059.52
12/15/2030	116,412.50	-	116,412.50	135,270.40	18,857.90
12/15/2031	114,612,50	-	114,612.50	135,271.12	20,658.62
12/15/2032	117,812,50	*	117,812.50	135,271.76	17,459.26
12/15/2033	115,912.50	-	115,912.50	135,271.80	19,359.30
12/15/2034	118,680.00	-	118,680.00	135,269.43	16,589.43
12/15/2035	116,330.00	-	116,330.00	135,272.25	18,942.25
12/15/2036	118,980.00	-	118,980.00	135,270.52	16,290.52
12/15/2037	116,512.50	-	116,512.50	135,270.46	18,757.96
12/15/2038	119,045.00	-	119,045.00	135,270.46	16,225.46
12/15/2039	116,075.00	_	116,075.00	135,271.61	19,196.61
12/15/2040	118,105.00	-	118,105.00	135,270.72	17,165.72
12/15/2041	•	-	•	1,993.61	1,993.61
Total	\$2,394,382.50	\$11,272.31	\$2,401,444.18	\$2,786,316.74	\$384,872.56
	nmary (Net to Net)				322,707.82
Net PV Cashflow S	avings @ 2.277%(Bond Yi	eld)			322,707.82
Contingency or Rou	unding Amount				4,210.63
Net Present Value I	Benefit				\$326,918.45
	2,217,707.82 PV Refunded I		- using victoria.		14.741%
	1,829,647 Refunded Princip				17.868%
Net PV Benefit / \$	1,895,000 Refunding Princi	pal			17.252%
Refunding Bond	Information				
Refunding Dated D Refunding Delivery			Marketing and the Control of the Con	· · · · · · · · · · · · · · · · · · ·	6/15/2020 6/15/2020
	The second secon				

2004Ref2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

#### City of Appleton, Minnesota

\$1,895,000 G.O. Refunding Bonds, Series 2020 (Preliminary A+ Rates as of 1/22/20)

### **Debt Service Schedule**

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
06/15/2020	•	-	-	•	-
12/15/2020	30,000,00	1.650%	19,947.50	49,947.50	49,947.50
06/15/2021	-	-	19,700.00	19,700.00	-
12/15/2021	80,000,00	1.650%	19,700.00	99,700.00	119,400.00
06/15/2022		-	19,040.00	19,040,00	
12/15/2022	80,000.00	1.650%	19,040.00	99,040.00	118,080.00
06/15/2023	-	-	18,380.00	18,380.00	
12/15/2023	80,000,00	1.650%	18,380.00	98,380.00	116,760.00
06/15/2024	-	-	17,720.00	17,720.00	
12/15/2024	80,000.00	1.650%	17,720,00	97,720.00	115,440.00
06/15/2025	_	-	17,060.00	17,060.00	-
12/15/2025	85,000.00	1.650%	17,060.00	102,060.00	119,120.00
06/15/2026	-	-	16,358,75	16,358.75	
12/15/2026	85,000.00	1.650%	16,358.75	101,358.75	117,717.50
06/15/2027	-	-	15,657.50	15,657.50	
12/15/2027	85,000.00	1.650%	15,657.50	100,657.50	116,315.00
06/15/2028	æ	-	14,956.25	14,956.25	
12/15/2028	85,000.00	2.000%	14,956.25	99,956,25	114,912,50
06/15/2029	_	-	14,106,25	14,106,25	
12/15/2029	90,000.00	2.000%	14,106.25	104,106.25	118,212.50
06/15/2030			13,206,25	13,206,25	
12/15/2030	90,000.00	2.000%	13,206,25	103,206.25	116,412,50
06/15/2031	-		12,306.25	12,306.25	110,712,50
12/15/2031	90,000.00	2.000%	12,306.25	102,306,25	114,612,50
06/15/2032	-	2.00070	11,406.25	11,406,25	114,012,50
12/15/2032	95,000,00	2.000%	11,406.25	106,406.25	117,812.50
06/15/2033	-	2.00070	10,456,25	10.456.25	117,012.30
12/15/2033	95,000,00	2.350%	10,456.25	105,456,25	116.012.60
06/15/2034	95,000,00	2.35070	9,340.00	9,340.00	115,912.50
12/15/2034	100,000.00	2.350%	9,340.00	109,340.00	110 (00 00
06/15/2035	100,000.00	2.55070	8,165.00		118,680.00
12/15/2035	100,000.00	2.350%	•	8,165.00	116 000 00
06/15/2036	100,000.00	2.330%	8,165.00	108,165.00	116,330.00
12/15/2036	105,000.00	2.350%	6,990.00	6,990.00	
	105,000.00	2.330%	6,990.00	111,990.00	118,980.00
06/15/2037	105 000 00	0.0000	5,756.25	5,756.25	
12/15/2037	105,000.00	2.350%	5,756.25	110,756.25	116,512.50
06/15/2038	110.000.00	0.70004	4,522.50	4,522.50	
12/15/2038	110,000.00	2.700%	4,522,50	114,522.50	119,045.00
06/15/2039	************		3,037.50	3,037.50	
12/15/2039	110,000.00	2.700%	3,037,50	113,037.50	116,075.00
06/15/2040	4.5.000.00		1,552.50	1,552.50	-
12/15/2040	115,000.00	2.700%	1,552,50	116,552.50	118,105.00
Total	\$1,895,000,00		\$499,382.50	\$2,394,382.50	-
Date And Term S	tructure				
Dated					6/15/2020
Delivery Date					6/15/2020
First available call dat	te				
Call Price	The second state of the se		· · · · · · · · · · · · · · · · · · ·	- Fall	
Yield Statistics					
Bond Year Dollars					\$21,767.50
Average Life		A	7		11,487 Years
Average Coupon				TO THE WAY A STATE OF THE STATE	2.2941656%
Net Interest Cost (NIC					2.4647961%
True Interest Cost (TI		***			2,4791080%
All Inclusive Cost (Al	(C)				2.6128883%
IRS Form 8038	-				
Net Interest Cost (NIC Weighted Average Ma					2,4647961% 11.487 Years
Bond Yield for Arbitr				T T T T T T T T T T T T T T T T T T T	2,2767970%
					2,210191070

2004Ref2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

Part 1 of 6

	Refunded						
Date	Bonds	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
06/15/2020	1,829,647.37	-1,829,647,37		4.375%	. (0,00)	(0,00)	
07/15/2020		· ·	4,602.00	4.375%	6,670.59	11,272.59	78
08/15/2020			4,619.00	4.375%	6,653.81	11,272.81	-
09/15/2020	-	-	4,636.00	4,375%	6,636.97	11,272.97	-
10/15/2020		<u>u</u>	4,652:00	4.375%-	6,620:07-		
11/15/2020		*	4,669.00	4.375%	6,603.11	11,272.11	-
12/15/2020	-	_	4,686.00	4.375%	6,586.09	11,272.09	67,634.64
01/15/2021	_	_	4,704.00	4.375%	6,569.00	11,273.00	-
02/15/2021			4,721.00	4.375%	6,551.85	11,272.85	-
03/15/2021		<u></u>	4,738.00	4.375%	6,534.64	11,272.64	-
04/15/2021			4,755.00	4.375%	6,517.37	11,272.37	_
05/15/2021	-	4	4,773.00	4,375%	6,500,03	11,273.03	-
06/15/2021			4,790.00	4.375%	6,482.63	11,272.63	-
07/15/2021	-	_	4,807.00	4.375%	6,465.16	11,272.16	-
08/15/2021	-	-	4,825.00	4.375%	6,447.64	11,272,64	=
09/15/2021	-		4,843.00	4.375%	6,430.05	11,273.05	_
10/15/2021	-	<del></del>	4,860.00	4.375%	6,412.39	11,272.39	_
11/15/2021	_	_	4,878.00	4,375%	6,394.67	11,272.67	-
12/15/2021	-	_	4,896.00	4.375%	6,376.89	11,272.89	135,272.32
01/15/2022	-	-	4,914.00	4,375%	6,359.04	11,273.04	**
02/15/2022	-	-	4,931.00	4.375%	6,341.12	11,272.12	
03/15/2022	_	-	4,949.00	4.375%	6,323.15	11,272.15	4
04/15/2022	_	_	4,967.00	4.375%	6,305.10	11,272.10	-
05/15/2022	_		4,986.00	4.375%	6,286.99	11,272,99	-
06/15/2022	_	_	5,004.00	4.375%	6,268.81	11,272.81	_
07/15/2022			5,022.00	4.375%	6,250.57	11,272.57	
08/15/2022	_		5,040.00	4.375%	6,232.26	11,272,26	_
09/15/2022	_	··	5,059.00	4.375%	6,213.89	11,272.89	_
10/15/2022	_	_	5,077.00	4.375%	6,195.44	11,272,44	-
11/15/2022	_		5,096.00	4.375%	6,176.93	11,272,93	-
12/15/2022			5,114.00	4.375%	6,158.35	11,272.35	135,270.65
01/15/2023	_	_	5,133.00	4.375%	6,139.71	11,272,71	· -
02/15/2023	_	<u>-</u>	5,152,00	4.375%	6,120.99	11,272.99	<del>-</del>
03/15/2023	_		5,170.00	4.375%	6,102.21	11,272.21	
04/15/2023	_	_	5,189.00	4.375%	6,083.36	11,272,36	-
05/15/2023			5,208.00	4.375%	6,064.44	11,272.44	-
06/15/2023		_	5,227.00	4.375%	6,045.46	11,272.46	-
07/15/2023	_	_	5,246.00	4.375%	6,026,40	11,272,40	
08/15/2023	-	_	5,265.00	4.375%	6,007.27	11,272,27	
09/15/2023		_	5,284.00	4.375%	5,988.08	11,272.08	_
10/15/2023	<u> </u>		5,304.00	4.375%	5,968.81	11,272.81	-
11/15/2023	- 		5,323.00	4.375%	5,949.48	11,272.48	
12/15/2023	-	<u>-</u>	5,342.00	4.375%	5,930.07	11,272.07	135,269.28
01/15/2024	-		5,362.00	4.375%	5,910.59	11,272.59	y
	<b>*</b>	_	5,382.00	4.375%	5,891.04	11,273.04	_
02/15/2024	-		5,401.00	4.375%	5,871.42	11,272.42	-
03/15/2024		_	5,421.00	4.375%	5,851.73	11,272.73	_
04/15/2024	-		J,4Z1.VU	4.31.370	2,031.13	11,414,13	<u>-</u>

04old2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

Part 2 of 6

	Refunded						
Date	Bonds	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
05/15/2024	-	-	5,441.00	4.375%	5,831.97	11,272.97	
06/15/2024	-	_	5,460.00	4.375%	5,812.13	11,272.13	-
07/15/2024	_	-	5,480.00	4,375%	5,792.22	11,272.22	-
08/15/2024		-	5,500.00	4.375%	5,772.25	11,272.25	-
09/15/2024	-	-	5,520.00	4.375%	5,752.19	11,272.19	-
10/15/2024	-	-	5,540.00	4.375%	5,732.07	11,272.07	-
11/15/2024	_	_	5,561.00	4.375%	5,711.87	11,272,87	-
12/15/2024	_	-	5,581.00	4.375%	5,691.60	11,272,60	135,270.08
01/15/2025	-		5,601.00	4.375%	5,671.25	11,272.25	
02/15/2025	_	-	5,622.00	4,375%	5,650.83	11,272.83	-
03/15/2025	_	_	5,642.00	4.375%	5,630.33	11,272.33	_
04/15/2025	_	_	5,663.00	4.375%	5,609.76	11,272,76	-
05/15/2025	_	_	5,683.00	4.375%	5,589.11	11,272.11	_
06/15/2025		-	5,704.00	4,375%	5,568.40	11,272.40	
07/15/2025	_	_	5,725.00	4,375%	5,547.60	11,272.60	-
08/15/2025	- -	_	5,746.00	4.375%	5,526.73	11,272.73	_
09/15/2025	-		5,767.00	4.375%	5,505.78	11,272.78	_
10/15/2025	•	_	5,788.00	4,375%	5,484.75	11,272.75	
11/15/2025			5,809.00	4.375%	5,463.65	11,272.65	
	-	_	5,830.00	4.375%	5,442.47	11,272.47	135,270.66
12/15/2025	-	-	5,851.00	4.375%	5,421.22	11,272.22	132,270.00
01/15/2026	-	-	5,873.00	4.375%	5,399.89	11,272.89	
02/15/2026	-	-	•			11,272.47	-
03/15/2026		-	5,894.00	4.375%	5,378.47		
04/15/2026	-	•	5,916.00	4.375%	5,356.98	11,272.98	-
05/15/2026	-	•	5,937.00	4.375%	5,335.42	11,272.42	-
06/15/2026	-	•	5,959.00	4.375%	5,313.77	11,272.77	-
07/15/2026	-	-	5,981.00	4.375%	5,292.05	11,273.05	-
08/15/2026			6,002.00	4.375%	5,270.24	11,272.24	
09/15/2026	-	-	6,024.00	4.375%	5,248.36	11,272.36	-
10/15/2026	-	-	6,046.00	4.375%	5,226.39	11,272.39	-
11/15/2026	-	-	6,068.00	4.375%	5,204.35	11,272.35	-
12/15/2026	-	-	6,090.00	4.375%	5,182.23	11,272.23	135,270.37
01/15/2027		-	6,113.00	4,375%	5,160.03	11,273.03	-
02/15/2027	-	-	6,135.00	4.375%	5,137.74	11,272.74	-
03/15/2027	=	-	6,157.00	4.375%	5,115.37	11,272.37	-
04/15/2027	-	-	6,180.00	4.375%	5,092.92	11,272.92	-
05/15/2027	-	-	6,202.00	4.375%	5,070.39	11,272.39	-
06/15/2027	<u> </u>	-	6,225.00	4.375%	5,047.78	11,272.78	-
07/15/2027	-	-	6,247.00	4.375%	5,025.09	11,272.09	-
08/15/2027	-	-	6,270.00	4.375%	5,002.31	11,272.31	-
09/15/2027	-	-	6,293.00	4.375%	4,979.45	11,272.45	-
10/15/2027	-		6,316.00	4.375%	4,956.51	11,272.51	-
11/15/2027	-	-	6,339.00	4.375%	4,933.48	11,272.48	
12/15/2027	-	-	6,362.00	4.375%	4,910.37	11,272.37	135,270.44
01/15/2028	-	-	6,385.00	4.375%	4,887.18	11,272.18	-
02/15/2028	-	-	6,409.00	4.375%	4,863.90	11,272.90	-
03/15/2028	-	-	6,432.00	4.375%	4,840.53	11,272.53	-

04old2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

Northland Securities, Inc.

Part 3 of 6

	Refunded						
Date	Bonds	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
04/15/2028	·		6,455.00	4.375%	4,817.08	11,272.08	
05/15/2028			6,479.00	4.375%	4,793.55	11,272.55	<u>-</u>
06/15/2028	-	-	6,503.00	4.375%	4,769.93	11,272,93	-
07/15/2028	-	-	6,526.00	4.375%	4,746.22	11,272,22	
08/15/2028			6,550.00	4.375%	4,722.42-	1,272.42-	<b>_</b>
09/15/2028	_	-	6,574.00	4.375%	4,698.54	11,272.54	_
10/15/2028	-	-	6,598.00	4.375%	4,674.58	11,272.58	
11/15/2028	-	_	6,622.00	4.375%	4,650.52	11,272.52	-
12/15/2028	-	_	6,646.00	4.375%	4,626.38	11,272.38	135,269.83
01/15/2029	-	_	6,670,00	4.375%	4,602.15	11,272.15	
02/15/2029		-	6,695,00	4,375%	4,577.83	11,272.83	-
03/15/2029		-	6,719.00	4.375%	4,553.42	11,272.42	
04/15/2029	-	-	6,744.00	4.375%	4,528,92	11,272.92	_
05/15/2029	_	_	6,768,00	4,375%	4,504.34	11,272.34	_
06/15/2029	_	-	6,793.00	4.375%	4,479.66	11,272.66	_
07/15/2029	-	-	6,818.00	4.375%	4,454.90	11,272.90	<u></u>
08/15/2029	-	_	6,843.00	4.375%	4,430.04	11,273.04	
09/15/2029	-	-	6,867.00	4.375%	4,405.09	11,272.09	-
10/15/2029	_	_	6,893.00	4,375%	4,380.05	11,273.05	_
11/15/2029	-	<b></b>	6,918.00	4,375%	4,354.92	11,272.92	
12/15/2029	-	æ	6,943.00	4.375%	4,329.70	11,272.70	135,272.02
01/15/2030	-	<u></u>	6,968.00	4.375%	4,304.39	11,272.39	
02/15/2030	-	-	6,994.00	4.375%	4,278.98	11,272,98	-
03/15/2030	-	-	7,019.00	4.375%	4,253.49	11,272.49	_
04/15/2030	_	-	7,045.00	4.375%	4,227.90	11,272.90	_
05/15/2030	_	-	7,070.00	4.375%	4,202.21	11,272.21	
06/15/2030	-		7,096.00	4.375%	4,176.43	11,272.43	
07/15/2030	_	-	7,122.00	4,375%	4,150.56	11,272.56	_
08/15/2030	-	-	7,148.00	4.375%	4,124.60	11,272.60	• •
09/15/2030	_	_	7,174.00	4.375%	4,098.54	11,272.54	_
10/15/2030	~	-	7,200.00	4.375%	4,072.38	11,272.38	_
11/15/2030			7,226.00	4.375%	4,046.13	11,272.13	
12/15/2030	_	-	7,253.00	4.375%	4,019.79	11,272.79	135,270.40
01/15/2031	_	-	7,279.00	4.375%	3,993.34	11,272.34	155,570.10
02/15/2031	_	-	7,306.00	4.375%	3,966.81	11,272.81	-
03/15/2031	_	_	7,332.00	4.375%	3,940.17	11,272.17	_
04/15/2031		· · · · · · · · · · · · · · · · · · ·	7,359.00	4.375%	3,913.44	11,272.44	
05/15/2031	-	_	7,386.00	4.375%	3,886.61	11,272.61	
06/15/2031	_		7,413.00	4.375%	3,859.68	11,272,68	_
07/15/2031		_	7,440.00	4.375%	3,832.65	11,272.65	_
08/15/2031			7,467.00	4.375%	3,805.53	11,272,53	_
09/15/2031	-		7,494.00	4.375%	3,778.31	11,272.31	
10/15/2031		_	7,522.00	4.375%	3,750.98	11,272.98	_
11/15/2031	-		7,549.00	4.375%	3,723.56	11,272.56	_
12/15/2031	_	_	7,577.00	4,375%	3,696.04	11,273.04	135,271.12
01/15/2032	_	-	7,604.00	4.375%	3,668.41	11,272.41	100,471.14
02/15/2032		-	7,632.00	4,375%	3,640.69	11,272.69	
JAI 141 AUJA	<del></del>	· · · · · · · · · · · · · · · · · · ·	1,032.00	J'215/0	J,U10.07	11,414.03	· · · · · · · · · · · · · · · · · · ·

04old2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

Northland Securities, Inc.

Part 4 of 6

	Refunded						
Date	Bonds	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
03/15/2032	-	-	7,660.00	4.375%	3,612.87	11,272.87	÷
04/15/2032	-	-	7,688.00	4,375%	3,584.94	11,272.94	₩
05/15/2032	-	-	7,716.00	4.375%	3,556.91	11,272.91	-
06/15/2032		-	7,744.00	4.375%	3,528.78	11,272.78	<b>H</b>
07/15/2032	-	-	7,772.00	4.375%	3,500.54	11,272.54	-
08/15/2032	-	-	7,800.00	4.375%	3,472.21	11,272.21	-
09/15/2032	-	_	7,829.00	4.375%	3,443.77	11,272.77	-
10/15/2032	-	-	7,857.00	4.375%	3,415.23	11,272.23	-
11/15/2032	-	_	7,886.00	4.375%	3,386.58	11,272.58	-
12/15/2032		-	7,915.00	4.375%	3,357.83	11,272.83	135,271.76
01/15/2033	_		7,944.00	4.375%	3,328.98	11,272.98	
02/15/2033		-	7,973.00	4.375%	3,300.01	11,273,01	-
03/15/2033	_	-	8,002.00	4.375%	3,270.94	11,272.94	_
04/15/2033	_	_	8,031.00	4.375%	3,241.77	11,272.77	<u></u>
05/15/2033	-	-	8,060.00	4.375%	3,212.49	11,272.49	
06/15/2033	-		8,089.00	4,375%	3,183.11	11,272,11	_
07/15/2033	_	-	8,119.00	4.375%	3,153.61	11,272.61	_
08/15/2033	-		8,149,00	4.375%	3,124.01	11,273.01	_
09/15/2033	_	-	8,178.00	4.375%	3,094.30	11,272.30	
10/15/2033	-	_	8,208.00	4.375%	3,064.49	11,272.49	
11/15/2033	_	_	8,238.00	4.375%	3,034.56	11,272,56	-
12/15/2033	_	_	8,268.00	4,375%	3,004.53	11,272.53	135,271.80
01/15/2034	_	_	8,298.00	4.375%	2,974.39	11,272.39	,
02/15/2034	_	_	8,328,00	4,375%	2,944.13	11,272.13	_
03/15/2034			8,359.00	4.375%	2,913.77	11,272.77	
04/15/2034	_	_	8,389.00	4.375%	2,883.29	11,272.29	_
05/15/2034	_	_	8,420.00	4.375%	2,852.71	11,272.71	_
06/15/2034	_	_	8,451.00	4.375%	2,822.01	11,273.01	_
07/15/2034	_	_	8,481.00	4.375%	2,791.20	11,272.20	_
08/15/2034			8,512.00	4.375%	2,760.28	11,272.28	
09/15/2034	_	_	8,543.00	4.375%	2,729.25	11,272.25	_
10/15/2034		_	8,574.00	4.375%	2,698.10	11,272.10	_
11/15/2034	_	_	8,606.00	4.375%	2,666.84	11,272.84	_
12/15/2034		_	8,637.00	4,375%	2,635.46	11,272.46	135,269.43
01/15/2035			8,669.00	4,375%	2,603.98	11,272.98	130,207.43
02/15/2035	- -	_	8,700.00	4.375%	2,572.37	11,272.37	_
03/15/2035	•	<u>-</u>	8,732.00	4.375%	2,540.65	11,272,65	_
04/15/2035	-	<del>"</del>	8,764.00	4,375%	2,508,82	11,272.82	_
05/15/2035	-	<del>"</del>	8,796.00	4.375%	2,476.86	11,272.86	_
NATURE CONTRACTOR OF THE PARTY		<u>-</u>	8,828.00	4.375%	2,444.80	11,272.80	<u>-</u>
06/15/2035 07/15/2035	-	- -	8,860.00	4.375%	2,412.61	11,272.61	-
	-	<u>-</u>	8,892.00	4.375%	2,380.31	11,272.31	-
08/15/2035 09/15/2035	-	-	8,925.00	4.375%	2,347.89	11,272.89	-
	-	-	8,957.00	4.375%	2,347.89	11,272.35	-
10/15/2035			8,990.00	4.375%	2,313.33	11,272.69	<u>-</u>
	-	-	9,023.00	4.375% 4.375%	,	11,272,92	135,272.25
12/15/2035	-	•	,		2,249.92	11,273.02	133,472.23
01/15/2036			9,056.00	4.375%	2,217.02	11,275.02	<u>·</u>

04old2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

Part 5 of 6

	Refunded						
Date	Bonds	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
02/15/2036			9,089.00	4.375%	2,184.00	11,273.00	
03/15/2036	- · · · · - · · - · · - · · · - · · · - · · · · - · · · · · · · · · · · · · · · · · · · ·		9,122.00	4.375%	2,150.87	11,272.87	-
04/15/2036	<u> </u>		9,155.00	4.375%	2,117.61	11,272.61	_
05/15/2036		_	9,188.00	4.375%	2,084,23	11,272.23	-
06/15/2036			9,222.00-	4.375%	2,050,74	11,272.74	
07/15/2036	_	_	9,255.00	4.375%	2,017.11	11,272.11	
08/15/2036	-	-	9,289.00	4.375%	1,983,37	11,272.37	-
09/15/2036			9,323.00	4.375%	1,949.50	11,272.50	-
10/15/2036	_	-	9,357.00	4.375%	1,915.51	11,272.51	_
11/15/2036	_	_	9,391.00	4.375%	1,881.40	11,272.40	_
12/15/2036	_	_	9,425,00	4,375%	1,847.16	11,272.16	135,270.52
01/15/2037	-	_	9,460,00	4.375%	1,812,80	11,272.80	-
02/15/2037			9,494.00	4.375%	1,778.31	11,272.31	
03/15/2037	_	_	9,529,00	4.375%	1,743,70	11,272.70	_
04/15/2037	_	_	9,564.00	4,375%	1,708.96	11,272.96	-
05/15/2037	_	_	9,598,00	4.375%	1,674.09	11,272.09	•
06/15/2037	_		9,633.00	4.375%	1,639.10	11,272.10	
07/15/2037			9,669,00	4,375%	1,603.97	11,272.97	
08/15/2037			9,704.00	4,375%	1,568.72	11,272.72	_
09/15/2037	-	_	9,739.00	4.375%	1,533.34	11,272.34	_
10/15/2037		-	9,775.00	4.375%	1,497.84	11,272.84	-
11/15/2037	-	-	9,810.00	4.375%	1,462.20	11,272.20	_
12/15/2037		<del>-</del>	9,846.00	4.375%	1,426.43	11,272.43	135,270.46
01/15/2038	-		9,882.00	4.375%	1,390.54	11,272.54	133,270.40
02/15/2038	-	-	9,918.00	4.375%	1,354.51	11,272.51	-
03/15/2038	•	-	9,954.00	4.375%	1,318.35	11,272.35	-
	•	-	9,991.00	4.375%	1,282.06	11,273.06	-
04/15/2038	*	•	10,027.00	4.375%	1,245.63	11,272.63	
05/15/2038	-	-	10,027.00	4.375%	1,243.03	11,272.08	-
06/15/2038	-	-				11,272.08	-
07/15/2038	-	-	10,100.00	4.375%	1,172.39		-
08/15/2038	-	-	10,137.00	4.375%	1,135.57	11,272.57	-
09/15/2038			10,174.00	4.375%	1,098.61	11,272.61	
10/15/2038	•	-	10,211.00	4.375%	1,061.51	11,272.51	-
11/15/2038	-	•	10,248.00	4.375%	1,024.29	11,272.29	125 250 46
12/15/2038	-	-	10,286.00	4.375%	986.92	11,272.92	135,270.46
01/15/2039	-	· =	10,323.00	4.375%	949.42	11,272.42	
02/15/2039			10,361.00	4.375%	911.79	11,272.79	
03/15/2039	₩.	-	10,399.00	4.375%	874.01	11,273.01	-
04/15/2039	-	-	10,436.00	4.375%	836.10	11,272.10	-
05/15/2039	' <b>=</b>	-	10,475.00	4.375%	798.05	11,273.05	-
06/15/2039	-	-	10,513.00	4.375%	759.86	11,272.86	-
07/15/2039			10,551.00	4.375%	721.53	11,272.53	
08/15/2039	-	-	10,589.00	4.375%	683.07	11,272.07	-
09/15/2039	-	-	10,628.00	4.375%	644.46	11,272.46	-
10/15/2039	-	-	10,667.00	4.375%	605.71	11,272.71	-
11/15/2039	-	-	10,706.00	4.375%	566.82	11,272.82	-
12/15/2039		-	10,745.00	4.375%	527.79	11,272.79	135,271.61

04old2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

Northland Securities, Inc.

Part 6 of 6

	Refunded						
Date	Bonds	D/S To Call	Principal	Coupon	Interest	Refunded D/S	Fiscal Total
01/15/2040	-		10,784.00	4.375%	488.62	11,272,62	
02/15/2040	-	-	10,823.00	4.375%	449.30	11,272.30	_
03/15/2040	_	-	10,863.00	4.375%	409.84	11,272,84	-
04/15/2040	-	-	10,902.00	4.375%	370.24	11,272.24	-
05/15/2040	-		10,942.00	4.375%	330.49	11,272.49	-
06/15/2040	-		10,982.00	4.375%	290.60	11,272.60	
07/15/2040	-	-	11,022.00	4.375%	250.56	11,272.56	
08/15/2040	-	_	11,062.00	4.375%	210.37	11,272.37	-
09/15/2040	-	-	11,103.00	4.375%	170.04	11,273.04	-
10/15/2040	-	-	11,143.00	4.375%	129.56	11,272.56	-
11/15/2040		<u> </u>	11,184.00	4.375%	88.94	11,272.94	-
12/15/2040	-	-	11,224.00	4.375%	48.16	11,272.16	135,270.72
01/15/2041	-	-	1,986.37	4,375%	7.24	1,993.61	-
12/15/2041	-	-	-	-	-	-	1,993.61
Total	\$1,829,647.37	\$1,829,647.37	\$1,829,647.37	-	\$945,397.06	\$2,775,044.43	-
Yield Statistics  Base date for Avg. Life & Avg. Coupon Calculation Average Life Average Coupon  Weighted Average Maturity (Par Basis)  Weighted Average Maturity (Original Price Basis)							6/15/2020 11.811 Years 4.3749997% 11.811 Years 11.811 Years
	and Information						(1,5,10,00)
Refunding Dated Date Refunding Delivery Date							6/15/2020
Returning Derivery Date							6/15/2020

04old2 | SINGLE PURPOSE | 1/27/2020 | 3:03 PM

